Wastewater Q&A

Q: Why are wastewater and stormwater capital investments and improvements paid for through bonds rather than through rate increases on the water utility bill?

A: In municipal government this issue of funding large capital investments/improvements with municipal utilities has surfaced with regularity, and almost always in the context of needed capital funding through bond and debt issuances and other creative means (grants, state and federal appropriations, lease financing). There are reasons why these utilities, which typically function as government "enterprises" -- paid for largely through utility-generated revenues and operated as a government-owned business -- need to rely upon additional funding sources to cover large capital expenses. In no particular order, the following factors come into play:

- Utility capital needs for upgrades, improvements, or replacements, frequently outpace the revenues that are derived from that utility. This is especially true as the industry sees significant advancements in technology and state-of-the-art treatment infrastructure.
- Utility rate structures typically cover operational costs but do not always cover the entirety of capital needs.
- The rapidly evolving regulatory landscape (largely at the federal level as enforced at the state level) has resulted in costly capital improvements that do necessitate additional funding strategies.
- In Flagstaff, our successes with water conservation have had positive impacts in lessening demand on our water utility, but has also had some consequential impact upon our wastewater treatment capacity attributed to increased concentrations of organics or higher Biological Oxygen Demands (BODs) due to less dilution in the system.
- In tourist-based economies, including Flagstaff, much of our utility usage is occurring through non rate-payers and there are peak uses that require capacity increases well beyond our localized capacity needs.
- Debt issuance within the enterprise is a tool that is used with growing regularity. Often times these debts may be secured through utility derived rates or special surcharges (special revenue bonds). General obligation bonds, backed by the general revenue of the municipality, are also not uncommon.

Q: How was the inflation amount determined for wastewater items?

A: The inflation factor was derived from inquiries to five different sources – vendors, consultants, and equipment manufacturers. The responses varied from 16% to 40%, based on the commodity- anything stainless steel had a high inflation rate. Fiberglass was another high-inflation item, and pipe was up 40%. Pumps and motors have seen increases upward of 30%. Labor costs have increased 5% in the past year. Prior to COVID, prices increased at least 10% to 15% annually. We used a 20% average. Additionally, we have seen a severe decrease in the number of firms willing to bid on our projects, bringing project costs higher.

Q: Please elaborate on the life expectancy of projects and equipment redundancy for eliminating the threat of closures and related inefficiencies.

A: The average life expectancy of the equipment in these projects is 20-30 years. Technology upgrades are always a component of this calculation. The life expectancy numbers come from the 2019 Biosolids Master Plan. Concrete can last 50-75 years. Redundancy is needed for maintenance purposes, allowing

us to take equipment offline and perform repairs. Regular maintenance increases the lifespan of any given equipment.

Q: Please elaborate on project priorities from the standpoint of what could be delayed or asked for in an upcoming bond since this ask is such a large piece of the Council goal of $70,000,000 in bond projects.

A: All but the last three projects need to be done, or the plants can have the potential to fail, making "delay" an unfavorable option. The three lowest priorities allow for the best efficiency – both in labor and energy costs, which make them attractive. For example, the Co-Gen project is one we don't really have to do. However, it can provide great benefit towards energy savings, and carbon neutrality. Any projects not funded by this bond will need to be funded through other means. Current wastewater revenues are committed to other needs, our current debt ratios are maxed out, and unfortunately the recent federal grant opportunities did not focus on wastewater needs. Additional means of funding these projects has not been identified at this time.

While the City of Flagstaff continues to see growth within the community, and associated wastewater capacity demands, none of the projects presented increase our permitted treatment capacity. The projects presented ensure that the City can continue to maintain our permitted compliance or increase our efficiencies. As a result, these projects cannot be funded by future development.

Q: How does the septage and grease system prevent abuse in what contaminants get introduced into the system?

A: There is no existing monitoring of septage and grease. The new system will include sensors that detect non-allowable contaminants at higher concentrations (pH, ORP, BOD, COD).

Q: How is the allocation of what waste goes to which plant determined?

A: All wastewater flows have the potential to be treated at Wildcat Hill. Some flows can be processed at Rio plant, depending on where they originate from. The wastewater system is gravity fed. All solids from the Rio plant must be transported to Wildcat Hill, for final processing.

Wildcat Hill Water Reclamation Plant flow comes from anything north of the railroad tracks from East of Switzer Canyon and from east of Ponderosa Parkway and Butler. The remaining flows go past Rio where 1.8 million gallons are pulled off the system and the balance of flow goes to Wildcat along with Rio de Flag Water Reclamation Plant Solids. Our current plan is to pull more flow off this line to reduce the hydraulic loading on Wildcat Hill.